

Switch OFF the BSM  
File: H\_FCP\_SPI\_BSMF.xls  
Author: R. Biggins



## Procedure Summary

### Objectives

The objective of this procedure is to switch OFF the Beam Steering Mechanism (BSM)

### Summary of Constraints

n/a

### Spacecraft Configuration

#### Start of Procedure

SPIRE is in SMEC\_OFF or PHOTSTBY mode

#### End of Procedure

SPIRE is in BSM\_OFF mode

### Reference File(s)

#### Input Command Sequences

#### Output Command Sequences

HFSBSMF

### Referenced Displays

**ANDs**      **GRDs**      **SLDs**  
SA\_6\_559  
SAC0\_559  
SAJ0\_559

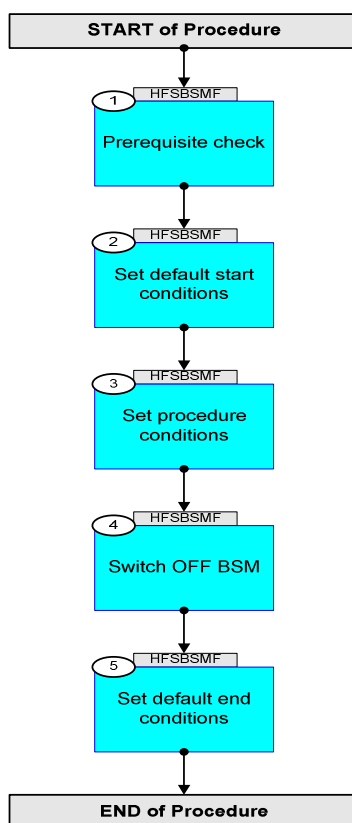
### Configuration Control Information

| DATE       | FOP ISSUE | VERSION | MODIFICATION DESCRIPTION  | AUTHOR     | SPR REF |
|------------|-----------|---------|---|------------|---------|
| 07/08/2007 |           | 1       | Created   | R. Biggins |         |
| 15/01/2008 |           | 2       | Update due to initial testing against the simulator:<br>2 - TCs updated due to new DB | R. Biggins |         |

Switch OFF the BSM  
 File: H\_FCP\_SPI\_BSMF.xls  
 Author: R. Biggins



## Procedure Flowchart Overview



Switch OFF the BSM  
 File: H\_FCP\_SPI\_BSMF.xls  
 Author: R. Biggins



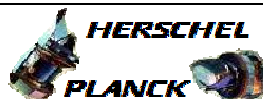
| Step No.                      | Time                         | Activity/Remarks  | TC/TLM                         | Display/ Branch |
|-------------------------------|------------------------------|---|--------------------------------|-----------------|
| <b>Beginning of Procedure</b> |                              |   |                                |                 |
| HFSBSMF Switch OFF BSM        |                              |   |                                |                 |
| SSID :                        |                              |   |                                |                 |
| 1                             |                              | Prerequisite check  |                                | Next Step:<br>2 |
|                               |                              | Verify Telemetry<br><br>MODE SM00M500   | = PHOTSTBY<br>= SMEC_OFF       | AND=SA_6_559    |
| 2                             |                              | Set default start conditions  |                                | Next Step:<br>3 |
|                               | ET=+00.00.00<br>UT=+00.00.00 | SET_OBS_STEP<br><br>Command Parameter(s) :<br>OBSERVATION_STEP SP03N500<br><br>TC Control Flags :<br>GBM IL DSE<br>--- -- ---<br><br>SSID : 370 | SC003500<br><br>0 <hex>        |                 |
|                               | ET=+00.00.00<br>UT=+00.00.00 | SET_BBID<br><br>Command Parameter(s) :<br>BUILDING_BLOCK_ID SP01N500<br><br>TC Control Flags :<br>GBM IL DSE<br>--- -- ---<br><br>SSID : 370    | SC001500<br><br>80010001 <hex> |                 |
|                               | ET=+00.00.02<br>UT=+00.00.02 | SET_OBS_STEP<br><br>Command Parameter(s) :<br>OBSERVATION_STEP SP03N500<br><br>TC Control Flags :<br>GBM IL DSE<br>--- -- ---<br><br>SSID : 370 | SC003500<br><br>1 <hex>        |                 |
|                               | ET=+00.00.00<br>UT=+00.00.00 | SET_OBSID<br><br>Command Parameter(s) :<br>OBSERVATION_ID SP00N500<br><br>TC Control Flags :<br>GBM IL DSE<br>--- -- ---<br><br>SSID : 370      | SC000500<br><br>B0000000 <hex> |                 |

Switch OFF the BSM  
 File: H\_FCP\_SPI\_BSMF.xls  
 Author: R. Biggins



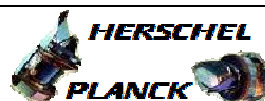
| Step No. | Time                         | Activity/Remarks   | TC/TLM                         | Display/ Branch |
|----------|------------------------------|--|--------------------------------|-----------------|
|          | ET=+00.00.01<br>UT=+00.00.01 | SET_OBS_STEP<br>SET_OBS_STEP<br>Command Parameter(s) :<br>OBSERVATION_STEP                      SP03N500<br>TC Control Flags :<br>GBM IL DSE<br>--- -- ---<br>SSID : 370 | SC003500<br><br>0 <hex>        |                 |
|          | ET=+00.00.00<br>UT=+00.00.00 | SET_BBID<br>SET_BBID<br>Command Parameter(s) :<br>BUILDING_BLOCK_ID                      SP01N500<br>TC Control Flags :<br>GBM IL DSE<br>--- -- ---<br>SSID : 370        | SC001500<br><br>80000000 <hex> |                 |
|          | ET=+00.00.01<br>UT=+00.00.01 | SET_OBS_STEP<br>SET_OBS_STEP<br>Command Parameter(s) :<br>OBSERVATION_STEP                      SP03N500<br>TC Control Flags :<br>GBM IL DSE<br>--- -- ---<br>SSID : 370 | SC003500<br><br>0 <hex>        |                 |
|          | ET=+00.00.01<br>UT=+00.00.01 | SET_BBID<br>SET_BBID<br>Command Parameter(s) :<br>BUILDING_BLOCK_ID                      SP01N500<br>TC Control Flags :<br>GBM IL DSE<br>--- -- ---<br>SSID : 370        | SC001500<br><br>80020001 <hex> |                 |
|          | ET=+00.00.02<br>UT=+00.00.02 | SET_OBS_STEP<br>SET_OBS_STEP<br>Command Parameter(s) :<br>OBSERVATION_STEP                      SP03N500<br>TC Control Flags :<br>GBM IL DSE<br>--- -- ---<br>SSID : 370 | SC003500<br><br>1 <hex>        |                 |
| 3        |                              | Set procedure conditions   |                                | Next Step:<br>4 |

Switch OFF the BSM  
 File: H\_FCP\_SPI\_BSMF.xls  
 Author: R. Biggins



| Step No. | Time                         | Activity/Remarks  | TC/TLM                         | Display/ Branch |
|----------|------------------------------|---|--------------------------------|-----------------|
|          | ET=+00.00.01<br>UT=+00.00.01 | RESET_DRCU_COUNTERS<br><br>RESET_DRCU_COUNTERS<br><br>TC Control Flags :<br><br>GBM IL DSE<br>---- -- --<br><br>SSID : 370  | SCD00505                       |                 |
|          | ET=+00.00.01<br>UT=+00.00.01 | SET_OBSID<br><br>SET_OBSID<br><br>Command Parameter(s) :<br>OBSERVATION_ID SP00N500<br><br>TC Control Flags :<br><br>GBM IL DSE<br>---- -- --<br><br>SSID : 370         | SC000500<br><br>OBS_ID         |                 |
|          | ET=+00.00.01<br>UT=+00.00.01 | SET_OBS_STEP<br><br>SET_OBS_STEP<br><br>Command Parameter(s) :<br>OBSERVATION_STEP SP03N500<br><br>TC Control Flags :<br><br>GBM IL DSE<br>---- -- --<br><br>SSID : 370 | SC003500<br><br>0 <hex>        |                 |
|          | ET=+00.00.01<br>UT=+00.00.01 | SET_BBID<br><br>SET_BBID<br><br>Command Parameter(s) :<br>BUILDING_BLOCK_ID SP01N500<br><br>TC Control Flags :<br><br>GBM IL DSE<br>---- -- --<br><br>SSID : 370        | SC001500<br><br>80000000 <hex> |                 |
|          | ET=+00.00.02<br>UT=+00.00.02 | SET_OBS_STEP<br><br>SET_OBS_STEP<br><br>Command Parameter(s) :<br>OBSERVATION_STEP SP03N500<br><br>TC Control Flags :<br><br>GBM IL DSE<br>---- -- --<br><br>SSID : 370 | SC003500<br><br>0 <hex>        |                 |
|          | ET=+00.00.00<br>UT=+00.00.00 | SET_BBID<br><br>SET_BBID<br><br>Command Parameter(s) :<br>BUILDING_BLOCK_ID SP01N500<br><br>TC Control Flags :<br><br>GBM IL DSE<br>---- -- --<br><br>SSID : 370        | SC001500<br><br>810b0001 <hex> |                 |

Switch OFF the BSM  
File: H\_FCP\_SPI\_BSMF.xls  
Author: R. Biggins



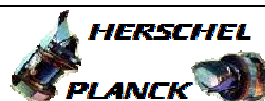
| Step No. | Time                         | Activity/Remarks  | TC/TLM  | Display/ Branch |
|----------|------------------------------|---|---|-----------------|
|          | ET=+00.00.01<br>UT=+00.00.01 | SET_OBS_MODE<br><br>SET_OBS_MODE<br><br>Command Parameter(s) :<br>OBSERVING_MODE                      SPD2N500<br><br>TC Control Flags :<br><br>GBM IL DSE<br>---- --<br><br>SSID : 370   | SC002500<br><br>2ff <hex>                       |                 |
|          |                              | Verify Telemetry<br><br>MODE                      SM00M500  | = BSM_OFF                                       | AND=SA_6_559    |
| 4        |                              | Switch OFF BSM  |   | Next Step:<br>5 |
|          | ET=+00.00.00<br>UT=+00.00.00 | Send DRCU command to SetChopTargetPosition<br><br>SEND_DRCU_COMMAND<br><br>Command Parameter(s) :<br>DRCUCOMMAND                      SPD4N505<br>OVERRIDE                      SPD9N505<br><br>TC Control Flags :<br><br>GBM IL DSE<br>---- --<br><br>SSID : 370 | SCD06505<br><br>90C38000 <hex><br>0 <hex> (Def) |                 |
|          |                              | Verify Telemetry<br><br>CHOPPOSN                      SMC0P515  | = 8000 <hex>                                    | AND=SAC0_559    |
|          | ET=+00.00.01<br>UT=+00.00.01 | Send DRCU command to SetJigTargetPosition<br><br>SEND_DRCU_COMMAND<br><br>Command Parameter(s) :<br>DRCUCOMMAND                      SPD4N505<br>OVERRIDE                      SPD9N505<br><br>TC Control Flags :<br><br>GBM IL DSE<br>---- --<br><br>SSID : 370  | SCD06505<br><br>91438000 <hex><br>0 <hex> (Def) |                 |
|          |                              | Verify Telemetry<br><br>JIGGPOSN                      SMJ0P515  | = 8000 <hex>                                    | AND=SAJ0_559    |
|          | ET=+00.00.00<br>UT=+00.00.00 | Send DRCU command to SetChopLoopMode<br><br>SEND_DRCU_COMMAND<br><br>Command Parameter(s) :<br>DRCUCOMMAND                      SPD4N505<br>OVERRIDE                      SPD9N505<br><br>TC Control Flags :<br><br>GBM IL DSE<br>---- --<br><br>SSID : 370       | SCD06505<br><br>90C20003 <hex><br>0 <hex> (Def) |                 |
|          |                              | Verify Telemetry<br><br>CHOPLOOPMODE                      SMC0M515  | = NO_SENSOR_BEMF                                | AND=SAC0_559    |

Switch OFF the BSM  
File: H\_FCP\_SPI\_BSMF.xls  
Author: R. Biggins



| Step No. | Time                         | Activity/Remarks  | TC/TLM  | Display/ Branch   |
|----------|------------------------------|---|---|-------------------|
|          | ET=+00.00.01<br>UT=+00.00.01 | Send DRCU command to SetJigLoopMode<br>SEND_DRCU_COMMAND<br><br>Command Parameter(s) :<br>DRCUCOMMAND SPD4N505<br>OVERRIDE SPD9N505<br><br>TC Control Flags :<br>GBM IL DSE<br>--- -- ---<br><br>SSID : 370 | SCD06505<br><br>91420003 <hex><br>0 <hex> (Def) |                   |
|          |                              | Verify Telemetry<br>JIGGLOOPMODE SML3M515   | = 2 <hex>                                       | AND=SAJ0_559      |
|          | ET=+00.00.00<br>UT=+00.00.00 | Send DRCU command to SetCSensopPwr<br>SEND_DRCU_COMMAND<br><br>Command Parameter(s) :<br>DRCUCOMMAND SPD4N505<br>OVERRIDE SPD9N505<br><br>TC Control Flags :<br>GBM IL DSE<br>--- -- ---<br><br>SSID : 370  | SCD06505<br><br>90C00000 <hex><br>0 <hex> (Def) |                   |
|          |                              | Verify Telemetry<br>CHOPSENSPWR SMC0W515  | = 0 <hex>                                       | AND=SA_6_559      |
|          | ET=+00.00.01<br>UT=+00.00.01 | Send DRCU command to SetJSensorPwr<br>SEND_DRCU_COMMAND<br><br>Command Parameter(s) :<br>DRCUCOMMAND SPD4N505<br>OVERRIDE SPD9N505<br><br>TC Control Flags :<br>GBM IL DSE<br>--- -- ---<br><br>SSID : 370  | SCD06505<br><br>91400000 <hex><br>0 <hex> (Def) |                   |
|          |                              | Verify Telemetry<br>JIGGSENSPWR SMJ0W515  | = 0 <hex>                                       | AND=SA_6_559      |
| 5        |                              | Set default end conditions  |   | Next Step:<br>END |
|          | ET=+00.00.00<br>UT=+00.00.00 | SET_OBS_STEP<br>SET_OBS_STEP<br><br>Command Parameter(s) :<br>OBSERVATION_STEP SP03N500<br><br>TC Control Flags :<br>GBM IL DSE<br>--- -- ---<br><br>SSID : 370   | SC003500<br><br>0 <hex>                         |                   |

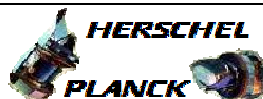
Switch OFF the BSM  
 File: H\_FCP\_SPI\_BSMF.xls  
 Author: R. Biggins



| Step No. | Time                         | Activity/Remarks  | TC/TLM                     | Display/ Branch |
|----------|------------------------------|---|----------------------------|-----------------|
|          | ET=+00.00.01<br>UT=+00.00.01 | SET_BBID<br>SET_BBID<br>Command Parameter(s) :<br>BUILDING_BLOCK_ID           SP01N500<br>TC Control Flags :<br>GBM IL DSE<br>--- -- ---<br>SSID : 370        | SC001500<br>80000000 <hex> |                 |
|          | ET=+00.00.02<br>UT=+00.00.02 | SET_OBS_STEP<br>SET_OBS_STEP<br>Command Parameter(s) :<br>OBSERVATION_STEP           SP03N500<br>TC Control Flags :<br>GBM IL DSE<br>--- -- ---<br>SSID : 370 | SC003500<br>0 <hex>        |                 |
|          | ET=+00.00.00<br>UT=+00.00.00 | SET_BBID<br>SET_BBID<br>Command Parameter(s) :<br>BUILDING_BLOCK_ID           SP01N500<br>TC Control Flags :<br>GBM IL DSE<br>--- -- ---<br>SSID : 370        | SC001500<br>80030001 <hex> |                 |
|          | ET=+00.00.02<br>UT=+00.00.02 | SET_OBS_STEP<br>SET_OBS_STEP<br>Command Parameter(s) :<br>OBSERVATION_STEP           SP03N500<br>TC Control Flags :<br>GBM IL DSE<br>--- -- ---<br>SSID : 370 | SC003500<br>1 <hex>        |                 |
|          | ET=+00.00.00<br>UT=+00.00.00 | SET_OBSID<br>SET_OBSID<br>Command Parameter(s) :<br>OBSERVATION_ID           SP00N500<br>TC Control Flags :<br>GBM IL DSE<br>--- -- ---<br>SSID : 370         | SC000500<br>B0000000 <hex> |                 |



Switch OFF the BSM  
 File: H\_FCP\_SPI\_BSMF.xls  
 Author: R. Biggins



| Step No.         | Time                         | Activity/Remarks   | TC/TLM                         | Display/ Branch |
|------------------|------------------------------|--|--------------------------------|-----------------|
|                  | ET=+00.00.01<br>UT=+00.00.01 | SET_OBS_STEP<br>SET_OBS_STEP<br>Command Parameter(s) :<br>OBSERVATION_STEP           SP03N500<br>TC Control Flags :<br>GBM IL DSE<br>--- -- --<br>SSID : 370 | SC003500<br><br>0 <hex>        |                 |
|                  | ET=+00.00.00<br>UT=+00.00.00 | SET_BBID<br>SET_BBID<br>Command Parameter(s) :<br>BUILDING_BLOCK_ID           SP01N500<br>TC Control Flags :<br>GBM IL DSE<br>--- -- --<br>SSID : 370        | SC001500<br><br>80000000 <hex> |                 |
|                  |                              |  |                                |                 |
| End of Procedure |                              |  |                                |                 |